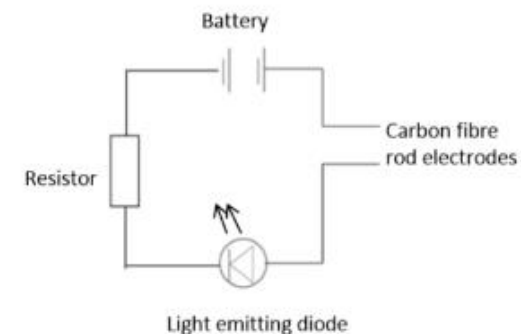
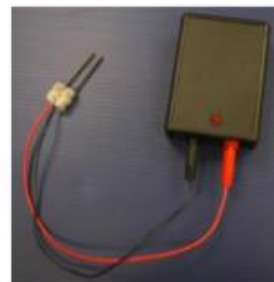


Using the CLEAPSS Conductivity indicator

Wear eye protection

Insert this sheet into a plastic folder.

On the right is a conductivity indicator, which consists of a battery, LED, a resistor to limit the current and carbon fibre electrodes in connectors.



- Place 3-4 drops of pure water in the left-hand circle so it is filled.



- Dip the electrodes in does the LED light up?
- Repeat the test with tap water in right-hand circle.
- Now add Universal Indicator solution to each circle and insert the electrodes again. Are signs of a reaction? What about the distilled water.

Now adding other salts

- Place some grains of salt into the black rectangle on the right
- Place 3-4 drops of pure water in the circle. On the right
- Hold the electrodes steady in the puddle where the circles is. Hope there is no light on the LED
- Dip a clean toothpick/cut splint into the puddle and then into sodium chloride (salt) to collect a couple of crystals.
- Place the crystals in the puddle and hold for 30 seconds, watching the LED

Disposal: Wipe over with a paper towel

Extension

- Try doing the procedure you carried out with salt with refined sugar in the circle on the right
- Other types of sugar can be used such as brown sugar

Chemistry note

The understanding of even the existence of ions is a very weak in many students. The aim here is to bring some clarity and evidence to help the teacher.

